

## Claims

[c1] What is claimed is:

1.A scanner comprising:

a housing including an upper case and a lower case;  
a shaft seat positioned between the upper case and the lower case;  
a shaft set on the shaft seat;  
a scanning module slidably set on the shaft;  
a lock set on the housing for fixing the scanning module;  
and  
a buffer pad set between the shaft seat and the shaft,  
between the shaft seat and the upper case or lower case,  
or between the lock and the scanning module.

[c2] 2.The scanner of claim 1 wherein the buffer pad is an arc-shaped elastomer set between the shaft seat and the shaft.

[c3] 3.The scanner of claim 1 wherein the buffer pad is a ring-shaped elastomer set between the shaft seat and the shaft.

[c4] 4.The scanner of claim 1 wherein the buffer pad is an elastomer laid on the lock and set between the lock and

the scanning module.

- [c5] 5.The scanner of claim 1 wherein the buffer pad is an elastomer set into a groove which is between the lock and the scanning module.
- [c6] 6. A scanner comprising:
  - a housing including an upper case and a lower case;
  - a shaft seat set between the upper case and the lower case;
  - a shaft set on the shaft seat;
  - a scanning module slidably set on the shaft; and
  - a buffer pad set between the shaft seat and the shaft or between the shaft seat and the upper case or the lower case.
- [c7] 7.The scanner of claim 6 wherein the buffer pad is an arc-shaped elastomer set between the shaft seat and the shaft.
- [c8] 8.The scanner of claim 6 wherein the buffer pad is a ring-shaped elastomer set between the shaft seat and the shaft.
- [c9] 9.The scanner of claim 6 wherein the scanner further comprises a bolt for fixing the scanning module.
- [c10] 10.The scanner of claim 9 wherein the surface of the bolt

is covered with an elastomer.

- [c11] 11. The scanner of claim 9 wherein a groove that contains the bolt in the scanning module is lined with an elastomer.